

In the Claims:

Please amend Claim 11 as indicated below. The status of all claims is as follows:

1. (Previously Presented) A magnetoresistive spin-valve sensor comprising:

a magnetic layer, the magnetic layer forming a free layer and having an effective magnetic layer thickness, excluding a thickness of a magnetically dead layer, greater than 0 and less than approximately 40Å;

another magnetic layer which forms a pinned layer;

a spacer layer interposed between the two magnetic layers;

an antiferromagnetic layer adjacent to the pinned layer, opposite to the spacer layer;

a specular layer made of a metal oxide;

a back layer, made of an AuCu or AgCu alloy, interposed between the magnetic layer and the specular layer, wherein said AuCu alloy has an atomic content of Au between 9.2 and an 15.9 at % and said AgCu alloy has an atomic content of Ag between 11.0 and 28.3 at %, and

a metal layer having a thickness of 10-50 Angstroms disposed adjacent to the specular layer, opposite to the back layer, and made of a metal which improves GMR performance of the magnetoresistive spin-valve sensor, wherein the metal layer is made of a

material selected from a group of Ta, Ru, Ni, Fe, Pd, Pt, Mn, Cu, Co, Ti, V, Cr, Zn, Y, Zr, Nb, Mo, Rh, Ag, Au, Hf, W, Re, Os, Ir, Nb and alloys thereof.

2. (Original) The magnetoresistive spin-valve sensor as claimed in claim 1, wherein the specular layer is made of a material selected from a group of CoO, Co₃O₄, Co₂O₃, Cu₂O, CuO, Al₂O₃, NiO, FeO, Fe₂O₃, MnO, TiO₂ and alloys thereof.

3-4. (Cancelled)

5. (Previously Presented) The magnetoresistive spin-valve sensor as claimed in claim 1, wherein the back layer has a thickness of approximately 20 Å or less.

6-9. (Cancelled)

10. (Previously Presented) A magnetic storage apparatus for reading information from a magnetic recording medium, including:

a magnetoresistive spin-valve sensor which reads the information from the magnetic recording medium,

said magnetoresistive spin-valve sensor comprising:

a magnetic layer, the magnetic layer forming a free layer and having an effective magnetic layer thickness, excluding a thickness of a magnetically dead layer, greater than 0 and less than approximately 40Å;

another magnetic layer which forms a pinned layer;

a spacer layer interposed between the two magnetic layers;

a specular layer made of a metal oxide;

an antiferromagnetic layer adjacent to the pinned layer, opposite to the spacer layer;

a back layer, made of an AuCu or AgCu alloy, interposed between the magnetic layer and the specular layer, wherein said AuCu alloy has an atomic content of Au between 9.2 and 15.9 at % and said AgCu alloy has an atomic content of Ag between 11.0 and 28.3 at %, and

a metal layer having a thickness of 10-50 Angstroms disposed adjacent to the specular layer, opposite to the back layer, and made of a metal which improves GMR performance of the magnetoresistive spin-valve sensor.

11. (Currently Amended) The magnetoresistive spin-valve sensor as claimed in claim 1, wherein:

the specular layer is made of a material selected from a group ~~of consisting~~
consisting of CoO, Co₃O₄, Co₂O₃, Cu₂O, CuO, Al₂O₃, NiO, FeO, Fe₂O₃, MnO, TiO₂ and
alloys thereof, and

the back layer has a thickness of approximately 20 Å or less.

12-13. (Cancelled)